

Express Mail: EV 18815053 US
Date Deposited: JANUARY 3, 2006

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known	
Application Number	10/642,248
Filing Date	08/15/2003
First Named Inventor	Paul L. DeAngelis
Group Art Unit	1617
Examiner Name	Not Yet Assigned
Attorney Docket Number	35542.097

U. S. PATENT DOCUMENTS

EXAM INIT.	Cite No. 1	U.S. PATENT NUMBER Number	Kind Code ² (If known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM- DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

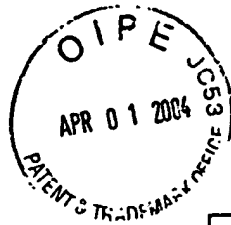
FOREIGN PATENT DOCUMENTS

EXAM INIT.	Cite No. 1	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Lines, Where Relevant Passages or Relevant Figures Appear	T ⁴
		Office 3	Number 4	Kind Code ⁵ (If known)				

U.S. and Foreign: ¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code (WIPO Standard St.3). ⁴Form Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

EXAM INIT.		<p align="center">NON-PATENT DOCUMENTS</p> <p align="center">Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published</p>
NE		PAUL L. DeANGELIS, "Molecular Directionality of Polysaccharide Polymerization by the <i>Pasteurella multocida</i> Hyaluronan Synthase", J. Biological Chemistry, Vol. 274: 26557-26562 (1999)
NE		C. HELDERMON, K. KUMARI, V. TLAPAK-SIMONS & P. WEIGEL, "Streptococcal hyaluronan synthase and the synthesis of 'designer' hyaluronan", Elsevier Science, 41-50 (2000)
NE		W. JING & P. DeANGELIS, "Synchronized Chemoenzymatic Synthesis of Monodisperse Hyaluronan Polymers", J. Biological Chemistry, Vol. 279: 42345-42349 (2004)
Non Patent Documents: ¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.		
Examiner Signature: <u>N. Angel</u>		Date Considered: <u>2/16/06</u>
EXAMINER: Initial if citation considered, whether or not citation is in conformance and not considered. Include copy of this form with next communication to applicant. **Place of Publication refers to name of publication in which the information was published.		

Suppl 1449.wpd



Express Mail: EV 447409978 US
Date Deposited: April 1, 2004

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known	
Application Number	10/642,248
Filing Date	08/15/2003
First Named Inventor	Paul L. DeAngelis, et al.
Group Art Unit	1617
Examiner Name	Unknown
Attorney Docket Number	3554.097

(use as many sheets as necessary)

U. S. PATENT DOCUMENTS							Class/Subclass
EXAM INIT.	Cite No. 1	U.S. PATENT NUMBER Number	Kind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
NE	a	4224179		Schneider	09/23/1980	252/316	
	b	4235871		Papahadjopoulos et al.	11/25/1980	424/19	
	c	4511478		Nowinski et al.	04/16/1985	210/691	
	d	4517295		Bracke et al.	05/14/1985	435/101	
	e	4585754		Meisner et al.	04/29/1986	514/8	
	f	4615697		Robinson	10/07/1986	604/890	
	g	4708861		Popescu et al.	11/24/1987	424/1.1	
	h	4780414		Nimrod et al.	10/25/1988	435/101	
	i	4782046		Brown et al.	11/01/1988	514/54	
	j	4784990		Nimrod et al.	11/15/1988	514/54	
	k	4801539		Akasaka et al.	01/31/1989	435/101	
	l	4822867		Erhan	04/18/1989	527/200	
	m	4983392		Robinson	01/08/1991	424/427	
	n	4990601		Skjak-Braek et al.	02/05/1991	536/3	
	o	5008253		Casu et al.	04/16/1991	514/54	
	p	5015577		Weigel et al.	05/14/1991	535/101	
	q	5023175		Hosoya et al.	06/11/1991	535/101	
	r	5071751		Morita et al.	10/12/1991	535/101	
	s	5171689		Kawaguri et al.	12/15/1992	435/29204/403.1	
	t	5217743		Farah	06/08/1993	427/2.3	
	u	5314876		Lormeau, et al.	05/24/1994	514/54	
	v	5337747		Neftel	08/16/1994	600/346	
✓	w	5384398		Lormeau, et al.	01/24/1995	536/21	
NE	x	5472704		Santus et al.	12/05/1995	424/435	

NEed 2/16/06

U. S. PATENT DOCUMENTS

EXAM INIT.	Cite No. 1	U.S. PATENT NUMBER Number	Kind Code ² (If known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
NE	y	5473034		Yasul et al.	12/05/1995	527/200
	z	5607694		Marx	03/04/1997	424/450
	aa	5610241		Lee et al.	03/11/1997	525/411
	ab	5622850		Sloma et al.	04/22/1997	435/224
	ac	5631019		Marx	05/20/1997	424/450
	ad	5651982		Marx	07/29/1997	424/450
	ae	5876433		Lunn	03/02/1999	623/1.15
	af	5948900		Yother et al.	09/07/1999	536/24.32
	ag	5958899		Zoppetti, et al.	09/28/1999	514/56
	ah	6120536		Ding, et al.	09/19/2000	623/1.43
	al	6156373		Zhong et al.	12/05/2000	427/2.28
	aj	6162797		Zoppetti, et al.	12/19/2000	514/54
	ak	RE37336		Weigel et al. 435/101	08/21/2001	514/54
✓	al	6423514		Briskin	04/23/2002	435/84
NE	am	20030100534		Zoppetti et al.	05/29/2003	

FOREIGN PATENT DOCUMENTS

EXAM INIT.	Cite No. 1	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figures Appear	T*
		Office 3	Number 4	Kind Code5 (If known)			
NE	A		0036776 EPO		Kleid et al.	05/11/1998	
NE	B		0144019 EPO		Brown et al.	06/13/1990	
NE	C		0195303 EPO		Grandi et al.	11/08/1989	
NE	D		0244757 EPO		Hosoya et al.	11/09/1994	
NE	E		0266578 EPO		Miyamori et al.	07/07/1993	
NE	F		00300035 EPO		Beckwith	05/10/1995	
NE	G		01304338 EPO		Zoppetti	04/23/2003	
NE	H		91/03559 WO		Weigel et al.	03/21/1991	
NE	I		94/00463 WO		Prehm et al.	01/06/1994	
NE	J		95/24497 WO		Lansing et al.	09/14/1995	
NE	K		95/33067 WO		Stohl, Stein	12/07/1995	
NE	L		97/20061 WO		Wong et al.	06/05/1997	
NE	M		00/27437 WO		Board of Regents of the University of Oklahoma	05/18/2000	
NE	N		01/02597 WO		Petrucchi et al.	01/11/2001	

NEsted 2/16/06

FOREIGN PATENT DOCUMENTS

EXAM INIT.	Cite No. 1	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Lines, Where Relevant Passages or Relevant Figures Appear	T*
		Office 3	Number 4	Kind Code 5 (if known)				
NE	O		PCT/US01/13395 WO 01/80810		WO 01/80810- PCT	11/01/2001		
NE	P		PCT/JP02/07859 WO 03/012099		WO 03/012099- PCT	02/13/2003		
NE	O		8-38336 JP		Itano et al.	1996		
NE	R		4-124854 JP			1992		
NE	S		4-134854 JP			1992		
NE	T		61-257169 JP			1986		
NE	U		4-80202			03/13/1992		
NE	V		63094988 JP			1988		
NE	W		62032893 JP			1987		
NE	X		4-158796 JP			1992		
NE	Y		2249315 GB			05/06/1992		

U.S. and Foreign: ¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard St.3). ⁴ Form Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT DOCUMENTS

EXAM INIT.		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
NE	AA	"THE COMBINATIONS OF HAEMOGLOBIN WITH OXYGEN AND WITH CARBON MONOXIDE.", Hill, J. Biochem., 7:471-480 (1913).
NE	AB	"DIE KINETIK DER INVERTINWIRKUNG", Michaelis and Menten, Biochem. Z., 49: 333-338 (1913) (No translation available).
NE	AC	"THE ROLE OF THE MUCOID POLYSACCHARIDE (HYALURONIC ACID) IN THE VIRULENCE OF GROUP A HEMOLYTIC STREPTOCOCCI", Kass et al., J. Of Exp. Med., 79:319-330 (1944).
NE	AD	"THE PRODUCTION OF CAPSULES, HYALURONIC ACID AND HYALURONIDASE BY GROUP A AND GROUP C STREPTOCOCCI", MacLennan, J. Gen. Microbiol., 14:134-142 (1956).
NE	AE	"THE ISOLATION AND CHARACTERIZATION OF A HYALURONIDASE PRODUCED BY A CAPSULATED STRAIN OF GROUP C STREPTOCOCCUS", MacLennan, J. Gen. Microbiol., 14:143-152 (1956).
NE	AF	"THE BIOSYNTHESIS OF HYALURONIC ACID BY GROUP A STREPTOCOCCUS", Markovitz et al., J. Biol. Chem., 234 (9):2343-2350 (1959).
NE	AG	"THE BIOSYNTHESIS OF HYALURONIC ACID BY STREPTOCOCCUS", Stoolmiller, et al., Journal of Biological Chemistry, Vol. 244, No. 2, pp. 236-246 (1969).
NE	AH	"CLEAVAGE OF STRUCTURAL PROTEINS DURING THE ASSEMBLY OF THE HEAD OF BACTERIOPHAGE T4", Laemmli, Nature, 227:680-685 (1970).
NE	AI	"THE ISOLATION AND CHARACTERIZATION OF HYALURONIC ACID FROM PASTEURELLA MULTOCIDA", Cifonelli, et al., Carbohydrate Research, 14, 272-276, (1970).
NE	AJ	"A RAPID AND SENSITIVE METHOD FOR THE QUANTITATION OF MICROGRAM QUANTITIES OF PROTEIN UTILIZING THE PRINCIPLE OF PROTEIN-DYE BINDING", Bradford, Analytical Biochemistry, 72:248-254 (1976).

NE

2/16/06

EXAM INIT.		<p style="text-align: center;">NON PATENT DOCUMENTS</p> <p>Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published</p>
NE	AK	"GENETIC MAPPING OF THE K1 AND K4 ANTIGENS (L) OF ESCHERICHIA COLI. NON-ALLELISM OF K(L) ANTIGENS WITH K ANTIGENS OF O8:K27(A), O8:K8 (L) AND O9:K57 (B)", Orskov et al., Acta Pathol Microbiol Scand B, 84:125-131 (1976).
NE	AL	"SYNTHESIS AND ASSEMBLY OF THE MEMBRANE PROTEINS IN E. COLI", Ito et al., Cell, 11:551-559 (1977).
NE	AM	"ELECTROPHORETIC TRANSFER OF PROTEINS FROM POLYACRYLAMIDE GELS TO NITROCELLULOSE SHEETS: PROCEDURE AND SOME APPLICATIONS", Biochemistry, 76: 4350-4354 (1979).
NE	AN	"BIOSYNTHESIS OF HYALURONIC ACID BY STREPTOCOCCUS", Sugahara et al., J. Biol. Chem., 254:6252-6261 (1979).
NE	AO	"MODERN GENETICS", Ayala, et al., Benjamin/Cummings Publishing Col., Menlo Park CA, p. 45 (1980).
NE	AP	"HYALURONIDASE PRODUCTION BY TYPE B PASTURELLA MULTOCIDA FROM CASES OF HEMORRHAGIC SEPTICEMIA", Carter, et al., Journal of Clinical Microbiology, p. 94-96, (1980).
NE	AQ	"HYALURONATE CAPSULE PREVENTS ATTACHMENT OF GROUP A STREPTOCOCCI TO MOUSE PERITONEAL MACROPHAGES", Whitnack et al., Infection and Immunity, 31(3):985-991 (1981).
NE	AR	"STRAINS OF ESCHERICHIA COLI CARRYING THE STRUCTURAL GENE FOR HISTIDYL-tRNA SYNTHETASE ON A HIGH COPY-NUMBER PLASMID", Eisenbeis, et al., Mol. Gen. Genet. 183:115-122 (1981).
NE	AS	"The Structure of the Capsular Polysaccharide (K5 Antigen) of Urinary-Tract-Infective Escherichia coli O10:K5:H4", Vann et al., Biochem J. 116:359-364 (1981).
NE	AT	"SYNTHESIS OF HYALURONATE IN DIFFERENTIATED TERATOCARCINOMA CELLS," Prehm, et al., J. Biochem, Vol. 211, pp. 181-189 (1983).
NE	AU	"STREPTOCOCCAL HYALURONIC ACID: PROPOSED MECHANISMS OF DEGRADATION AND LOSS OF SYNTHESIS DURING STATIONARY PHASE", Van de Rijn, J. Bacteriol., 156(3):1059-1065 (1983).
NE	AV	"DIFFERENCES IN THE EFFECTS OF pH ON THE HYDROLYTIC AND TRANSGALACTOSYLIC REACTIONS OF BETA-GALACTOSIDASE (ESCHERICHIA COLI)", Huber et al., Can. J. Biochem. Cell Biol., 61:198-206 (1983).
NE	AW	"HYALURONATE IS SYNTHESIZED AT PLASMA MEMBRANES", Prehm, Biochem. J., 220:597-600 (1984).
NE	AX	"SUBCELLULAR LOCATIONS OF HYALURONATE SYNTHASE IN OLIGODENDROGLIOMA CELLS", Philipson et al., J. Biol. Chem., 259(8):5017-5023 (1984).
NE	AY	"BINDING AND REACTIVITY AT THE 'GLUCOSE' SITE OF GALACTOSYL-BETA-GALACTOSIDASE (ESCHERICHIA COLI)", Huber et al., Arch Biochem Biophys., 234: 151-160 (1984).
NE	AZ	"Heparin, Its Fractions, Fragments and Derivatives. Some Newer Perspectives", Fareed, Seminars in Thrombosis and Hemostasis. 11(1):1-9 (1985).
NE	BA	"SOLUBILIZATION OF HYALURONIC ACID SYNTHETIC ACTIVITY FROM STREPTOCOCCI AND ITS ACTIVATION WITH PHOSPHOLIPIDS", Triscott et al., J. Biol. Chem., 261(13):6004-6009 (1986).
NE	BB	"ISOLATION OF STREPTOCOCCAL HYALURONATE SYNTHASE", Prehm et al., Biochem. J., 235:887-889 (1986).
NE	BC	"EFFECT OF REPLACING URIDINE 33 IN YEAST tRNAPhe ON THE REACTION WITH RIBOSOMES", Dix et al., J. Biol. Chem., 261(22):10112-8 (1986).
NE	BD	"Molecular Cloning and Analysis of Genes for Production of K5, K7, K12, and K92 Capsular Polysaccharides in Escherichia coli", Roberts et al., J. Bacteriology. 168(3):1228-1233 (1986).
NE	BE	"ISOLATION, STRUCTURE AND EXPRESSION OF MAMMALIAN GENES FOR HISTIDYL-tRNA SYNTHETASE," Tsui, et al., Nucleic Acids Research, Vol. 15, No. 8, pp. 3349-3367, (1987).
NE	BF	"ROLE OF CYSTEINE IN GLUTATHIONE SYNTHASE FROM ESCHERICHIA COLI B", Kato et al., J. Biol. Chem., 263(24):11646-11651 (1988).
NE	BG	"STRUCTURE AND SEROLOGICAL CHARACTERISTICS OF THE CAPSULAR K4 ANTIGEN OF ESCHERICHIA COLI O5:K4:H4, A FRUCTOSE-CONTAINING POLYSACCHARIDE WITH A CHONDROITIN BACKBONE", Rodriguez et al., Eur. J. Biochem., 177:117-124 (1988).

NEsted

2/16/06

EXAM INIT.		<p style="text-align: center;">NON PATENT DOCUMENTS</p> <p>Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published</p>
NE	BH	"THE CARBOXY-TERMINAL DOMAIN OF THE LexA REPRESSOR OLIGOMERISES ESSENTIALLY AS THE ENTIRE PROTEIN", Schnarr et al., FEBS Lett., 234:56-60 (1988).
NE	BI	"Common Organization of Gene Clusters for Production of Different Capsular Polysaccharides (K Antigens) in Escherichia coli", Roberts, J. Bacteriology. 170(3):1305-1310 (1988).
NE	BJ	"THE BIOLOGY OF HYALURONAN", Evered and Whelan Eds., CIBA Foundation Symposium 143 (1989).
NE	BK	"A CRYPTIC FIMBRIAL GENE IN SERRATIA MARCESCENS", Moriya et al., J. Bacteriol., 171(12): 6629-36 (1989).
NE	BL	"MONOCLONAL ANTIBODIES SPECIFIC FOR K88ab, K88ac and K88ad ANTIGENS OF ESCHERICHIA COLI", Li et al., Wei Sheng Wu Xue Bao, 29:348-353 (1989). (Abstract only)
NE	BM	"KINETIC CHARACTERIZATION OF THE UNISITE CATALYTIC PATHWAY OF SEVEN BETA-SUBUNIT MUTANT F1-ATPases FROM ESCHERICHIA COLI", al-Shawi et al., J. Biol. Chem., 264(26): 15376-83 (1989).
NE	BN	"THE ROLE OF BACTERIAL POLYSACCHARIDE CAPSULES AS VIRULENCE FACTORS", Moxon et al., Current Topics in Microbiology and Immunology, 150:65-85 (1990).
NE	BO	"SLOW-BINDING INHIBITION OF THE ESCHERICHIA COLI PYRUVATE DEHYDROGENASE MULTIENZYME COMPLEX BY ACETYLPHOSPHINATE", Schonbrunn-Hanebeck et al., Biochemistry, 29(20): 4880-5 (1990).
NE	BP	"MOLECULAR CLONING AND EXPRESSION OF THE GENES ENCODING THE ESCHERICHIA COLI K4 CAPSULAR POLYSACCHARIDE, A FRUCTOSE-SUBSTITUTED CHONDROITIN", Drake et al., FEMS Microbiol. Lett., 54(1-3):227-30 (1990).
NE	BQ	"Expression of the Escherichia coli K5 Capsular Antigen: Immunoelectron Microscopic and Biochemical Studies with Recombinant E. coli", Kroncke et al., J. Bacteriology. 172(2):1085-1091 (1990).
NE	BR	"Molecular analysis of the Escherichia coli K5 kps locus: identification and characterization of an inner-membrane capsular polysaccharide transport system", Smith et al., Molecular Microbiology. 4(11):1863-1869 (1990).
NE	BS	"SHUTTLE VECTORS CONTAINING A MULTIPLE CLONING SITE AND A LACZA GENE FOR CONJUGAL TRANSFER OF DNA FROM ESCHERICHIA COLI TO GRAM-POSITIVE BACTERIA", Trieu-Cout, et al., Gene, Vol. 102, pp. 99-104, (1991).
NE	BT	"HYALURONIC ACID CAPSULE IS A VIRULENCE FACTOR FOR MUCOID GROUP A STREPTOCOCCI", Wessels et al., Microbiology, 88:8317-8321 (1991).
NE	BU	"ELECTRON MICROSCOPIC STUDY OF COEXPRESSION OF ADHESIVE PROTEIN CAPSULES AND POLYSACCHARIDE CAPSULES IN ESCHERICHIA COLI", Kronke et al., Infect. Immunity, 58:2710-4 (1991).
NE	BV	"TRANSPORT AND UTILIZATION OF FERRIOXAMINE-E-BOUND IRON IN ERWINIA HERBICOLA (Pantoea agglomerans)", Matzanke et al., Biol. Met., 181-185 (1991).
NE	BW	"MODULATION OF THE TIGHT BINDING OF CARBOXYARABINITOL 1, 5-BIPHOSPHATE TO THE LARGE SUBUNIT OF RIBULOSE 1,5-BISPHOSPHATE CARBOXYLASE/OXYGENASE", Smrcka et al., Arch. Biochem. Biophys., 286: 14-9 (1991).
NE	BX	"Biosynthesis of heparin. Use of Escherichia coli K5 capsular polysaccharide as a model substrate in enzymic polymer-modification reactions", Kusche et al., Biochem J. 275(pt1):151-8 (1991).
NE	BY	"Experimental and Clinical Pharmacology of Glycosaminoglycans (GAGs)". Soldani et al., Drugs Exptl. Clin. Res. XVII(1):81-85 (1991).
NE	BZ	"ANALYSIS OF THE STREPTOCOCCAL HYALURONIC ACID SYNTHASE COMPLEX USING THE PHOTOAFFINITY PROBE 5-AZIDO-UDP-GLUCURONIC ACID," Van de Riijn, et al., J. Biol. Chem., Vol. 267, No. 34, pp. 24302-24306, (1992).
NE	CA	"MOLECULAR CHARACTERIZATION OF A LOCUS REQUIRED FOR HYALURONIC ACID CAPSULE PRODUCTION IN GROUP A STREPTOCOCCI," Dougherty, et al., J. Exp. Med., Vol. 175, pp. 1291-1299, (1992).
NE	CB	"HYALURONAN," Laurent, et al., FASEB Journal, Vol. 6, pp. 2397-2404, (1992).
NE	CC	"ROLE OF CYSTEINS 640, 656, AND 661 IN STEROID BINDING TO RAT GLUCOCORTICOID RECEPTORS", Chakraborti et al., J. Biol. Chem., 267(16):11366-11373 (1992).

NEed

2/16/06

EXAM INIT.		NON PATENT DOCUMENTS
		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
NE	CD	"SLOW-ONSET INHIBITION OF RIBOSOMAL PEPTIDYLTRANSFERASE BY LINCOMYCIN", Kallia-Raftopoulos et al., Arch. Biochem. Biophys., 298: 332-339 (1992).
NE	CE	"ENHANCED CATALYSIS BY ACTIVE-SITE MUTAGENESIS AT ASPARTIC ACID 153 IN ESCHERICHIA COLI ALKALINE PHOSPHATASE", Matlin et al., Biochemistry, 31(35): 8196-8200 (1992).
NE	CF	"A STUDY OF VITAMIN INHIBITION ON THE MUTAGENICITY OF THE ANTINEOPLASTIC DRUGS", Zhao and Huang, Zhonghua Yu Fang Yi Xue Za Zhi, 26:291-293 (1992). (Abstract only)
NE	CG	"Biosynthesis of heparin. The D-glucuronosyl- and N-acetyl-D-glucosaminyltransferase reactions and their relation to polymer modification", Lidholt et al., Biochem J. 287(pt 1):21-9 (1992).
NE	CH	"HYALURONIC ACID AND A (1-4)-B-D-XYLAN, EXTRACELLULAR POLYSACCHARIDES OF PASTEURELLA MULTOCIDA (CARTER TYPE A) STRAIN 880", Rosner, et al., Carbohydrate Research, 223, 329-333 (1992).
NE	CI	"LOCALIZATION OF HYALURONAN IN MOUSE EMBRYOS DURING IMPLANTATION, GASTRULATION AND ORGANOGENESIS", Fenderson et al., Differentiation, 54:85-98 (1993).
NE	CJ	"HYALURONAN-BINDING PROTEINS IN DEVELOPMENT, TISSUE HOMEOSTASIS, AND DISEASE", Knudson et al., FASEB, 7:1233-1241 (1993).
NE	CK	"MOLECULAR CLONING, IDENTIFICATION, AND SEQUENCE OF THE HYALURONAN SYNTHASE GENE FROM GROUP A STREPTOCOCCUS PYOGENES", DeAngelis et al., J. Biol. Chem., 268(26):19181-19184 (1993).
NE	CL	"ISOLATION OF A STREPTOCOCCUS PYOGENES GENE LOCUS THAT DIRECTS HYALURONAN BIOSYNTHESIS IN ACAPSULAR MUTANTS AND IN HETEROLOGOUS BACTERIA," DeAngelis, et al., J. Biol. Chem., Vol. 268, No. 20, pp. 14568-14571, (1993).
NE	CM	"HYALURONATE SYNTHASE: CLONING AND SEQUENCING OF THE GENE FROM STREPTOCOCCUS SP.," Lansing, et al., J. Biochem., Vol. 289, pp. 179-184, (1993).
NE	CN	"MOLECULAR CHARACTERIZATION OF HASB FROM AN OPERON REQUIRED FOR HYALURONIC ACID SYNTHESIS IN GROUP A STREPTOCOCCI," Dougherty, et al., J. Biol. Chem., Vol. 268, No. 10, pp. 7118-7124, (1993).
NE	CO	"PRELIMINARY STUDY OF TEST METHODS TO ASSESS THE VIRUCIDAL ACTIVITY OF SKIN DISINFECTANTS USING POLIOVIRUS AND BACTERIOPHAGES", Davies et al., Journal of Hospital Infection, 25(2): 125-131 (1993).
NE	CP	"THE ESCHERICHIA COLI serA-LINKED CAPSULE LOCUS AND ITS FLANKING SEQUENCES ARE POLYMORPHIC, GENETIC EVIDENCE FOR THE EXISTENCE OF MORE THAN TWO GROUPS OF CAPSULE GENE CLUSTERS", Drake et al., J. Gen. Microbiol., 139 (Pt. 8): 1707-1714 (1993).
NE	CQ	"REACTION OF MODIFIED AND UNMODIFIED tRNA (Tyr) SUBSTRATES WITH TYROSYL-tRNA SYNTHETASE (Bacillus stearothermophilus)", Avis et al., Biochemistry, 32(20): 5312-5320 (1993).
NE	CR	"EFFECT OF pH ON SOLUBILITY AND IONIC STATE OF LIPOPOLYSACCHARIDE OBTAINED FROM THE DEEP ROUGH MUTANT OF ESCHERICHIA COLI", Din et al., Biochemistry, 32(17): 4579-4586 (1993).
NE	CS	"Synthesis of the K5 (group II) capsular polysaccharide in transport-deficient recombinant Escherichia coli", Bronner et al., FEMS Microbiology Letters 113:273-284 (1993).
NE	CT	"Biosynthesis of Heparin/Heparan Sulfate", Lind et al., The Journal of Biological Chemistry. 268(28):20705-20708 (1993).
NE	CU	"Capsular hyaluronic acid in Pasteurella multocida type A and its counterpart in type D", Pandit et al., Research in Veterinary Science. 54:20-24 (1993).
NE	CV	"EFFECTS ON VIRULENCE OF MUTATIONS IN A LOCUS ESSENTIAL FOR HYALURONIC ACID CAPSULE EXPRESSION IN GROUP A STREPTOCOCCI", Wessels et al., Infection and Immunity, 62(2):433-441 (1994).
NE	CW	"A HYALURONIDASE ACTIVITY OF THE SPERM PLASMA MEMBRANE PROTEIN PH-20 ENABLES SPERM TO PENETRATE THE CUMULUS CELL LAYER SURROUNDING THE EGG", Lin et al., The Journal of Cell Biology, 125(5): 1157-1163 (1994).
NE	CX	"DYNAMICS OF LACTOSE PERMEASE OF ESCHERICHIA COLI DETERMINED BY SITE-DIRECTED FLUORESCENCE LABELING", Jung et al., Biochemistry, 33:3980-3985 (1994).

N. Steed 2/16/06

EXAM INIT.		NON PATENT DOCUMENTS
		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
NE	CY	"CYSTEINE 148 IN THE LACTOSE PERMEASE OF ESCHERICHIA COLI IS A COMPONENT OF A SUBSTRATE BINDING SITE", Wu et al., Biochemistry, 33:12166-12171 (1994).
NE	CZ	"MOLECULAR CHARACTERIZATION OF HASA FROM AN OPERON REQUIRED FOR HYALURONIC ACID SYNTHESIS IN GROUP A STREPTOCOCCI," Dougherty, et al., J. Biol. Chem., Vol. 269, No. 1, pp. 169-175, (1994).
NE	DA	"THE STREPTOCOCCUS PYOGENES HYALURONAN SYNTHASE: SEQUENCE COMPARISON AND CONSERVATION AMONG VARIOUS GROUP A STRAINS," DeAngelis, et al., Biochem. and Biophys. Res. Comm., Vol. 199, No. 1, pp. 1-10, (1994).
NE	DB	"MOLECULAR FINGERPRINTING OF PASTEURELLA MULTOCIDA ASSOCIATED WITH PROGRESSIVE ATROPHIC RHINITIS IN SWINE HERDS". Gardner et al. Database Medline on Dialog, US Nat'l. Library of Medicine (Bethesda, MD, USA) No. 95161494, Abstract, J. Vet. Diagn. Invest. Oct. 1994. Vol. 6, No. 4 pages 442-447, see entire abstract.
NE	DC	"AMINO ACID RESIDUES OF THE KRINGLE-4 AND KRINGLE-5 DOMAINS OF HUMAN PLASMINOGEN THAT STABILIZE THEIR INTERACTIONS WITH OMEGA-AMINO ACID LIGANDS", McCance et al., J. Biol. Chem., 269(51):32405-32410 (1994).
NE	DD	"Heparin-like compounds prepared by chemical modification of capsular polysaccharide from E. coli", Casu et al., Elsevier Science. 263:271-284 (1994).
NE	DE	"Substrate specificities of glycosyltransferases involved in formation of heparin precursor and E. Coli K5 capsular polysaccharides", Lidholt et al., Carbohydrate Research. 255:87-101 (1994).
NE	DF	"Presumptive Identification of Pasteurella multocida serogroups A, D and F by capsule depolymerisation with mucopolysaccharidases", Rimler, Veterinary Record. 134:191-192 (1994).
NE	DG	"HYALURONIDASE AND CHONDROITINASE ACTIVITY OF PASTEURELLA MULTOCIDA SEROTYPE B:2 INVOLVED IN HAEMORRHAGIC SEPTICAEMIA", Rimler, et al., Veterinary Record 134, 67-68 (1994).
NE	DH	"THE ELUCIDATION OF NOVEL CAPSULAR GENOTYPES OF HAEMOPHILUS INFLUENZAE TYPE B WITH THE POLYMERASE CHAIN REACTION. Leaves et al. J. Medical Microbiology. 1995, Vol. 43, pages 120-124, entire document.
NE	DI	"KINETIC MECHANISM OF KINESIN MOTOR DOMAIN", Ma and Taylor, Biochemistry, 34(40): 13233-13241 (1995).
NE	DJ	"Cloning of the putative tumor suppressor gene for hereditary multiple exostoses (EXT1)", Ahn et al., Nat. Genet. 11(2):137-43 (1995).
NE	DK	"Region 2 of the Escherichia coli K5 capsule gene cluster encoding proteins for the biosynthesis of the K5 polysaccharide", Petit et al., Molecular Microbiology. 17(4):611-620 (1995).
NE	DL	"Structural and functional properties of heparin analogues obtained by chemical sulphation of Escherichia coli K5 capsular polysaccharide", Razi et al., Biochem J. 309 (pt2):465-72 (1995).
NE	DM	"Influence of chondroitinase on direct hemagglutination titers and phagocytosis of Pasteurella multocida serogroups A, D and F", Rimler et al., Veterinary Microbiology. 47:287-294 (1995).
NE	DN	"HOMOLOGS OF THE XENOPUS DEVELOPMENTAL GENE DG42 ARE PRESENT IN ZEBRAFISH AND MOUSE AND ARE INVOLVED IN THE SYNTHESIS OF NOD-LIKE CHITIN OLIGOSACCHARIDES DURING EARLY EMBRYOGENESIS", Semino et al., Proc. Natl Acad. Sci. USA, 93:4548-4553 (1996).
NE	DO	"ENZYMOLOGICAL CHARACTERIZATION OF THE PASTEURELLA MULTOCIDA HYALURONIC ACID SYNTHASE", DeAngelis, Biochemistry, 35 (30): 9768-9771 (1996).
NE	DP	"CONSTRUCTION AND CHARACTERIZATION OF A POTENTIAL LIVE ORAL CARRIER-BASED VACCINE AGAINST VIBRIO CHOLERAEE". Favre et al. Infection and Immunity. September 1996. Vol. 64, No. 9 pages 3565-3570, entire document.
NE	DQ	"FUNCTIONAL CLONING OF THE cDNA FOR A HUMAN HYALURONAN SYNTHASE", Shyjan et al., J. Biol. Chem., 271(38):23395-23399 (1996).
NE	DR	"COATING THE SURFACE: A MODEL FOR EXPRESSION OF CAPSULAR POLYSIALIC ACID IN ESCHERCHIA COLI K1", Bliss et al., Molecular Microbiology. 21(2):221-231 (1996).

N. Stuedt 2/16/95

EXAM INIT.		<p style="text-align: center;">NON PATENT DOCUMENTS</p> <p>Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published</p>
NE	DS	"MOLECULAR CLONING AND CHARACTERIZATION OF A PUTATIVE MOUSE HYALURONAN SYNTHASE", Spicer et al., J. Biol. Chem., 271(38):23400-23406 (1996).
NE	DT	"EXPRESSION CLONING AND MOLECULAR CHARACTERIZATION OF HAS PROTEIN, A EUKARYOTIC HYALURONAN SYNTHASE", Itano et al., J. Biol. Chem., 271(17):9875-9878 (1996).
NE	DU	"MOLECULAR IDENTIFICATION OF A PUTATIVE HUMAN HYALURONAN SYNTHASE", Wantanabe et al., J. Biol. Chem., 271(38):22945-22948 (1996).
NE	DV	"MOLECULAR CLONING OF A HUMAN HYALURONAN SYNTHASE", Itano et al., Biochemical and Biophysical Research Communications, 222:816-820 (1996).
NE	DW	"PRODUCTION AND PURIFICATION OF AN EXTRACELLULARLY PRODUCED K4 POLYSACCHARIDE FROM ESCHERICHIA COLI", Manzoni et al., Biotechnol. Lett., 18(4): 383-386 (1996).
NE	DX	"A NOVEL FAMILY OF PHOSPHOLIPASE D HOMOLOGUES THAT INCLUDES PHOSPHOLIPID SYNTHASES AND PUTATIVE ENDONUCLEASES: IDENTIFICATION OF DUPLICATED REPEATS AND POTENTIAL ACTIVE SITE RESIDUES", Ponting and Kerr, Protein Science, 914-922 (May 1996).
NE	DY	"BIOSYNTHESIS OF DERMATAN SULPHATE. DEFRUCTOSYLATED ESCHERICHIA COLI K4 CAPSULAR POLYSACCHARIDE AS A SUBSTRATE FOR THE D-GLUCURONYL C-5 EPIMERASE, AND AN INDICATION OF A TWO-BASE REACTION MECHANISM", Hannesson et al., Biochem. J., 313(Pt. 2): 589-596 (1996).
NE	DZ	"The EXT2 multiple exostoses gene defines a family of putative tumor suppressor genes", Stickens et al., Nat. Genet. 14(1):25-32 (1996).
NE	EA	"CONSTRUCTION AND CHARACTERIZATION OF A POTENTIAL LIVE ORAL CARRIER-BASED VACCINE AGAINST VIBRIO CHOLERAEE". Favre et al. Infection and Immunity. September 1996. Vol. 64, No. 9 pages 3565-3570, entire document.
NE	EB	"CAPSULAR HYALURONIC ACID-MEDIATED ADHESION OF PASTEURELLA MULTOCIDA TO TURKEY AIR SAC MACROPHAGES", Prulmboom, et al., Avian Diseases 40:887-893, (1996).
NE	EC	"HYALURONAN SYNTHASES", Weigel et al., J. Biol. Chem., 272 (22): 13997-14000 (1997).
NE	ED	"IDENTIFICATION OF SULFHYDRYL-MODIFIED CYSTEINE RESIDUES IN THE LIGAND BINDING POCKET OF RETINOIC ACID RECEPTOR β ", Wolfgang et al., J. Biol. Chem., 272(2):746-753 (1997).
NE	EE	"HYALURONAN IN MORPHOGENESIS", B.P. Toole, Journal of Internal Medicine, 242:35-40 (1997).
NE	EF	"HYALURONAN SYNTHASE OF CHLORELLA VIRUS PBCV-1", DeAngelis et al, Science, 278:1800-1803 (1997).
NE	EG	"MOLECULAR CLONING, EXPRESSION, AND CHARACTERIZATION OF THE AUTHENTIC HYALURONAN SYNTHASE FROM GROUP C STREPTOCOCCUS EQUISIMILIS", Kumari and Weigel, J. Biol. Chem., 272(51):32539-32546 (1997).
NE	EH	"SITE-DIRECTED SPIN LABELING OF TRANSMEMBRANE DOMAIN VII AND THE 4B1 ANTIBODY EPITOPE IN THE LACTOSE PERMEASE OF ESCHERICHIA COLI", Voss et al., Biochemistry, 36:15055-15061 (1997).
NE	EI	"REACTIVE CYSTEINES OF THE YEAST PLASMA-MEMBRANE H -ATPase (PMA1)", Petrov et al., J. Biol. Chem., 272(3):1688-1693 (1997).
NE	EJ	"BIOSYNTHESIS OF THE ESCHERICHIA COLI K4 CAPSULE POLYSACCHARIDE: A PARALLEL SYSTEM FOR STUDIES OF GLYCOSYLTRANSFERASES IN CHONDROITIN FORMATION", Lidholt et al., J. Biol. Chem., 272(5):2682-2687 (1997).
NE	EK	"KINETIC MECHANISM OF MONOMERIC NON-CLARET DISJUNCTIONAL PROTEIN (Ncd) ATPase", Pechatnikova et al., J. Biol. Chem., 272(49): 30735-30740 (1997).
NE	EL	"A TWO-SITE MECHANISM FOR ATP HYDROLYSIS BY THE ASYMMETRIC REP DIMER P2S AS REVEALED BY SITE-SPECIFIC INHIBITION WITH ADP-A1F4", Wong and Lohman, Biochemistry, 36(11): 3115-3125 (1997).
NE	EM	"The Structure of the Human Multiple Exostoses 2 Gene and Characterization of Homologs in Mouse and Caenorhabditis elegans", Clines et al., Cold Spring Harbor Laboratory Press. 7:359-367 (1997).
NE	EN	"Identification and Localization of the Gene for EXTL, a Third Member of the Multiple Exostoses Gene Family", Wise et al., Cold Spring Harbor Laboratory Press. 7:10-16 (1997).

N. Shedd 2/16/06

EXAM INIT.		NON PATENT DOCUMENTS	
		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	
NE	EO	"IDENTIFICATION AND MOLECULAR CLONING OF A UNIQUE HYALURONAN SYNTHASE FROM PASTEURELLA MULTOCIDA", DeAngelis et al., J. Biol. Chem., 273(14): 8454-8458 (1998).	
NE	EP	"THE CAPSULE BIOSYNTHETIC LOCUS OF PASTEURELLA MULTOCIDA A:1. Chung, et al. FEMS Microbiol. Lett. 15 September 1998, Vol. 166, No. 2, pages 289-296, entire document.	
NE	EQ	"CYS-SCANNING MUTAGENESIS: A NOVEL APPROACH TO STRUCTURE-FUNCTION RELATIONSHIPS IN POLYTOPIC MEMBRANE PROTEINS", Frillingos et al., FASEB, 12:1281-1299 (October 1998).	
NE	ER	"CHARACTERIZATION AND MOLECULAR EVOLUTION OF A VERTEBRATE HYALURONAN SYNTHASE GENE FAMILY", Spicer et al., J. Biol. Chem., 273(4):1923-1932 (1998).	
NE	ES	"EUKARYOTIC HYALURONAN SYNTHASES", Spicer and McDonald, Glycoforum, September 15, 1998.	
NE	ET	"THE ACTIVE STREPTOCOCCAL HYALURONAN SYNTHASES (HASs) CONTAIN A SINGLE HAS MONOMER AND MULTIPLE CARDIOLIPIN MOLECULES", Tlapak-Simmons et al., J. Biol. Chem., 273(40):26100-26109 (1998).	
NE	EU	"ROLE OF FIMBRIAE-MEDIATED ADHERENCE FOR NEUTROPHIL MIGRATION ACROSS ESCHERICHIA COLI-INFECTED EPITHELIAL CELL LAYERS", Godaly et al., Molecular Microbiology, 30(4): 725-735 (1998).	
NE	EV	"COMPLETE KINETIC MECHANISM OF ELONGATION FACTOR Tu-DEPENDENT BINDING OF AMINOACYL-tRNA TO THE A SITE OF THE E. COLI RIBOSOME", Pape et al., EMBO J., 17(24): 7490-7497 (1998).	
NE	EW	WYATT TECHNOLOGY CORPORATION: Heparin Characterization. 4/5; www.tlqc.org.	
NE	EX	GRIFFITHS, G., et al.: Characterization of the Glycosyltransferase Enzyme from the Escherichia coli K5 Capsule Gene Cluster and Identification and Characterization of the Glucuronyl Active Site. The Journal of Biological Chemistry, 273(19):11752-11757 (1998).	
NE	EY	"Expression and functional analysis of mouse EXT1, a homolog exostoses type 1 gene", Lin et al., Biochem Biophys Res Commun., 248(3):738-43 (1998).	
NE	EZ	"The Putative Tumor Suppressors EXT1 and EXT2 Are Glycosyltransferases Required for the Biosynthesis of Heparan Sulfate", Lind et al., The Journal of Biological Chemistry, 273(41):26265-26268 (1998).	
NE	FA	"The putative tumor suppressor EXT1 alters the expression of cell-surface heparan sulfate", McCormick et al., Nat. Genet. 19(2):158-61 (1998).	
NE	FB	"The localization of KpsC, S and T, and KfiA, C and D Proteins Involved in the biosynthesis of the Escherichia coli K5 capsular polysaccharide: evidence for a membrane-bound complex", Rigg et al., Microbiology 144, 2905-2914 (1998).	
NE	FC	"Identification of a Third EXT-like Gene (EXTL3) Belonging to the EXT Gene Family", Van Hul et al., Genomics. 47(2):230-7 (1998).	
NE	FD	"TRANSPOSON Tn916 INSERTIONAL MUTAGENESIS OF PASTEURELLA MULTOCIDA AND DIRECT SEQUENCING OF DISRUPTION SITE", Paul L. DeAngelis, Microbial Pathogenesis, 24: 203-209 (1998).	
NE	FE	"HYALURONAN SYNTHASE EXPRESSION IN BOVINE EYES", Usui et al., Investigative Ophthalmology & Visual Science, 40(3):563-567 (March 1999).	
NE	FF	"THREE ISOFORMS OF MAMMALIAN HYALURONAN SYNTHASES HAVE DISTINCT ENZYMATIC PROPERTIES", Itano et al., J. Biol. Chem., 274(35):25085-25092 (1999).	
NE	FG	"HYALURONAN SYNTHASES: FASCINATING GLYCOSYLTRANSFERASES FROM VERTEBRATES, BACTERIAL PATHOGENS AND ALGAL VIRUSES", P.L. DeAngelis, CMLS, 56:670-682 (1999).	
NE	FH	"MEMBRANE PROTEIN FOLDING AND STABILITY: PHYSICAL PRINCIPLES", White and Wimley, Annu. Rev. Biophys. Biomol. Struct., 28:319-365 (1999).	
NE	GI	"LOCATION OF HELIX III IN THE LACTOSE PERMEASE OF ESCHERICHIA COLI AS DETERMINED BY SITE-DIRECTED THIOL CROSS-LINKING", Wang and Kaback, Biochemistry, 38:16777-16782 (1999).	
NE	GJ	"KINETIC CHARACTERIZATION OF THE RECOMBINANT HYALURONAN SYNTHASES FROM STREPTOCOCCUS PYOGENES AND STREPTOCOCCUS EQUISIMILIS", Tlapak-Simmons, J. Biol. Chem., 274(7):4246-4253 (1999).	

N. Freed

2/16/06

EXAM INIT.		<p style="text-align: center;">NON PATENT DOCUMENTS</p> <p>Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published</p>
NE	GK	"PURIFICATION AND LIPID DEPENDENCE OF THE RECOMBINANT HYALURONAN SYNTHASES FROM STREPTOCOCCUS PYOGENES AND STREPTOCOCCUS EQUISIMILIS", Tiapak-Simmons, J. Biol. Chem., 274(7):4239-4245 (1999).
NE	GL	"STRUCTURE/FUNCTION STUDIES OF GLYCOSYLTRANSFERASES", Breton and Imberty, Current Opinion in Structural Biology, 9:563-571 (1999).
NE	GM	"TRANSFER RNA IDENTITY CONTRIBUTES TO TRANSITION STATE STABILIZATION DURING AMINOACYL-tRNA SYNTHESIS", Ibba et al., Nucleic Acids Research, 27(18):3631-3637 (1999).
NE	GN	"CONTRACTILE FUNCTION AND MYOPLASMIC FREE Ca ²⁺ (Cam) IN CORONARY AND MESENTERIC ARTERIES OF ENDOTOXEMIC GUINEA PIGS", Jones et al., Shock, 11: 64-71 (1999).
NE	GO	"Biosynthesis of the Escherichia coli K5 Polysaccharide, a Representative of Group II Polysaccharides: Polymerization In Vitro and Characterization of the Product", Finke et al., Journal of Bacteriology. 4088-4094 (1999).
NE	GP	"The Tumor Suppressor EXT-like Gene EXTL2 Encodes an 1, 4-N-Acetylhexosaminyltransferase That Transfers N-Acetylgalactosamine and N-Acetylglucosamine to the Common Glycosaminoglycan-Protein Linkage Region", Kitigawa et al., The Journal of Biological Chemistry. 273(20):13933-13937 (1999).
NE	GQ	"Production and Chemical Processing of Low Molecular Weight Heparins", Linhardt et al., Thieme Medical Publishers, Inc. 25(3):5-16 (1999).
NE	GR	"New Insights on the specificity of heparin and heparan sulfate lyases from Flavobacterium heparinum revealed by the use of synthetic derivatives of K5 polysaccharide from E. coli and 2-O-desulfated heparin", Nader et al., Glycoconj J. 16(6):265-70 (1999).
NE	GS	"A director interaction between EXT proteins and glycosyltransferases is defective in hereditary multiple exostoses", Simmons et al., Hum. Mol. Genet. ; 8(12):2155-64 (1999).
NE	GT	"Identification of mutations in the human EXT1 and EXT2 genes", Song et al., Chin J. Med. Genet., 16(4):208-10 (1999).
NE	GU	"NEW FRONTIERS IN MEDICAL SCIENCES: REDEFINING HYALURONAN", Abatangelo and Welgel Eds., (2000).
NE	GV	"IN VITRO SYNTHESIS OF HYALURONAN BY A SINGLE PROTEIN DERIVED FROM MOUSE HAS1 GENE AND CHARACTERIZATION OF AMINO ACID RESIDUES ESSENTIAL FOR THE ACTIVITY", Yoshida et al., J. Biol. Chem., 275(1):497-506 (2000).
NE	GW	"REGULATION OF PLASMINOGEN ACTIVATOR INHIBITOR-1 AND UROKINASE BY HYALURONAN FRAGMENTS IN MOUSE MACROPHAGES", Horton et al., Am. J. Physiol. Lung Cell Mol. Physiol., 279:L707-L715 (2000).
NE	GX	IDENTIFICATION AND MOLECULAR CLONING OF A CHONDROITIN SYNTHASE FROM PASTEURELLA MULTOCIDA TYPE F, Paul DeAngelis, et al., JOURNAL OF BIOLOGICAL CHEMISTRY, Vol. 275, No. 31, pp. 24124-24129, April 2000.
NE	GY	"KINETIC STUDIES ON THE INTERACTION BETWEEN A RIBOSOMAL COMPLEX ACTIVE IN PEPTIDE BOND FORMATION AND THE MACROLIDE ANTIBIOTICS TYLOSIN AND ERYTHROMYCIN", Dinos et al., Biochemistry, 39(38): 11621-11628 (2000).
NE	GZ	"STRUCTURE-FUNCTION RELATIONSHIPS IN NOVEL PEPTIDE DODECAMERS WITH BROAD-SPECTRUM BACTERICIDAL AND ENDOTOXIN-NEUTRALIZING ACTIVITIES", Mayo et al., Biochemical Journal, 349(3): 717-728 (2000).
NE	HA	"Pasteurella multocida capsule: composition, function and genetics", Boyce et al., Journal of Biotechnology 83:153-160 (2000).
NE	HB	"Biosynthesis of heparin/heparan sulfate: kinetic studies of the glucuronyl C5-epimerase with N-sulfated derivatives of the Escherichia coli K5 capsular polysaccharide as substrates", Hagner-McWhirter et al., Glycobiology. 10(2):159-71 (2000).
NE	HC	"Identification That KfiA, a Protein Essential for the Biosynthesis of the Escherichia coli K5 Capsular Polysaccharide, Is a UDP-GlcNAc Glycosyltransferase", Hodson et al., The Journal of Biological Chemistry, 275(35):27311-27315 (2000).
NE	HD	"EXT 1 Gene Mutation Induces Chondrocyte Cytoskeletal Abnormalities and Defective Collagen Expression in the Exostoses", Legeat-Mallet et al., J Bone Miner Res. 15(8):1489-500 (2000).
NE	HE	"Disruption of gastrulation and heparan sulfate biosynthesis in EXT1-Deficient Mice", Lin et al., Dev. Biol. 224(2):299-311 (2000).

Noted 2/16/96

EXAM INIT.		<p style="text-align: center;">NON PATENT DOCUMENTS</p> <p>Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published</p>
NE	HF	"The putative tumor suppressors EXT1 And EXT2 form a stable complex that accumulates in the Golgi apparatus and catalyzes the synthesis of heparan sulfate", McCormick et al., PNAS, 97(2):668-673 (2000).
NE	HG	"Heparan/Chondroitin Sulfate Biosynthesis", Pedersen et al., The Journal of Biological Chemistry, 275(44):34580-34585 (2000).
NE	HH	"Heparin and heparan sulfate: biosynthesis, structure and function", Sasisekharan et al., Elsevier Science, Ltd. 1367-5931:626-631 (2000).
NE	HI	"The EXT1/EXT2 tumor suppressors: catalytic activities and role in heparan sulfate biosynthesis", Senay et al., EMBO Reports 1(3):282-286 (2000).
NE	HJ	"Structural Analysis of Glycosaminoglycans in Drosophila and Caenorhabditis elegans and Demonstrations That tout-velu, a Drosophila Gene Related to EXT Tumor Suppressors, Affects Heparan Sulfate in Vivo", Toyoda et al., The Journal of Biological Chemistry, 275(4):2269-2275 (2000).
NE	HK	"Location of the Glucuronosyltransferase Domain in the Heparan Sulfate Copolymerase EXT1 by Analysis of Chinese Hamster Ovary Cell Mutants", Wei et al., The Journal of Biological Chemistry, 275(36):27733-27740 (2000).
NE	HL	"COMPLETE CYSTEINE-SCANNING MUTAGENESIS AND SITE DIRECTED CHEMICAL MODIFICATION OF THE Tn10- ENCODED METAL-TETRACYCLINE/H ANTIporter", Tamura et al., J. Biol. Chem., 276(23):20330-20339 (2001).
NE	HM	"IDENTIFICATION AND DISRUPTION OF TWO DISCRETE LOCI ENCODING HYALURONIC ACID CAPSULE BIOSYNTHESIS GENES hasA, hasB, and hasC IN STREPTOCOCCUS UBERIS", Ward et al., Infection and Immunity, 69(1):392-399 (2001).
NE	HN	"TOPOLOGICAL ORGANIZATION OF THE HYALURONAN SYNTHASE FROM STREPTOCOCCUS PYOGENES", Heldermon et al., J. Biol. Chem., 276(3):2037-2046 (2001).
NE	HO	"SITE-DIRECTED MUTATION OF CONSERVED CYSTEINE RESIDUES DOES NOT INACTIVATE THE STREPTOCOCCUS PYOGENES HYALURONAN SYNTHASE", Heldermon et al., Glycobiology, 11(12):1017-1024 (2001).
NE	HP	"MOLECULAR CLONING OF RABBIT HYALURONIC ACID SYNTHASES AND THEIR EXPRESSION PATTERNS IN SYNOVIAL MEMBRANE AND ARTICULAR CARTILAGE", Ohno et al., Biochimica et Biophysica Acta, 1520 (71-78) (2001).
NE	HQ	MOLECULAR CLONING AND EXPRESSION OF A HUMAN CHONDROITIN SYNTHASE, Hiroshi Kitagawa, et al., JOURNAL OF BIOLOGICAL CHEMISTRY, Vol. 276, No. 42, pp. 38721-38726, August 2001.
NE	HR	UTILITY OF MOLECULARLY DISSECTED SYNTHASES FOR CHEMOENZYMATIC SYNTHESIS OF GLYCOSAMINOGLYCAN OLIGOSACCHARIDES, Paul DeAngelis, GLYCOBIOLOGY, Vol. 11, No. 10, pp. 934, October 2001.
NE	HS	"RING OPENING IS NOT RATE-LIMITING IN THE GTP CYCLOHYDROLASE I REACTION", Bacher et al., J. Biol. Chem., 276(4): 2622-2626 (2001).
NE	HT	"SUBUNIT COMMUNICATION IN TETRAMERIC CLASS 2 HUMAN LIVER ALDEHYDE DEHYDROGENASE AS THE BASIS FOR HALF-OF-THE-SITE REACTIVITY AND THE DOMINANCE OF THE ORIENTAL SUBUNIT IN A HETEROTETRAMER", Weiner et al., Chemico-Biological Interactions, 130-132(1-3):47-56 (2001).
NE	HU	BIO TIE THERAPIES; BioHeparin - Prospectus; June 2001. (Finland)
NE	HV	"Etiological Point Mutations in the Hereditary Multiple Exostoses Gene EXT1: A Functional Analysis of Heparan Sulfate Polymerase Activity", Cheung et al., Am. J. Hum. Genet. 69:55-66, (2001).
NE	HW	"The link between heparan sulfate and hereditary bone disease: finding a function for the EXT family of putative tumor suppressor proteins", Duncan et al., The Journal of Clinical Investigation, 108(4):511-516 (2001).
NE	HX	"Human tumor suppressor EXT gene family members EXTL1 and EXTL3 encode alpha 1,4-N-acetylglucosaminyltransferases that likely are involved in heparan sulfate/heparin biosynthesis", Kim et al., Proc. Natl. Acad. Sci. U.S.A. 1998(13):7176-81 (2001).
NE	HY	"rib-2, a Caenorhabditis elegans Homolog of the Human Tumor Suppressor EXT Genes Encodes a Novel 1,4-N-Acetylglucosaminyltransferase Involved in the Biosynthetic Initiation and Elongation of Heparan Sulfate", Kitagawa et al., The Journal of Biological Chemistry, 276(7):4834-4838 (2001).
NE	HZ	"Fibroblast Growth Factor-2 Antagonist Activity and Angiostatic Capacity of Sulfated Escherichia coli K5 Polysaccharide Derivatives", Leall et al., The Journal of Biological Chemistry, 276(41):37900-37908 (2001).

Noted 2/16/06

EXAM INIT.		NON PATENT DOCUMENTS
		Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
ne	IA	"Complete genomic sequence of Pasteurella multocida, Pm70", May et al., Proc. Natl. Acad. Sci. 98(6):3460-3465 (2001).
ne	IB	"Toward a Biotechnological Heparin through Combined Chemical and Enzymatic Modification of the Escherichia coli K5 Polysaccharide", Naggi et al., Seminars in Thrombosis and Hemostasis, 27(5):437-443 (2001).
ne	IC	"Genetic organization of Pasteurella multocida cap loci and development of a multiplex capsular typing system", Townsend et al., J. Clin. Microbiol. 39(3):924-929 (2001).
ne	ID	"Anticoagulation: The Present and Future" Van Aken et al., Clin. Appl. Thrombosis/Hemostasis, 7(3):195-204, (2001).
ne	IE	"THE STREPTOCOCCAL HYALURONAN SYNTHASES ARE INHIBITED BY SULFHYDRYL-MODIFYING REAGENTS, BUT CONSERVED CYSTEINE RESIDUES ARE NOT ESSENTIAL FOR ENZYME FUNCTION", Kumar et al., J. Biol. Chem., 277(16):13943-13952 (2002).
ne	IF	BIOSYNTHESIS OF CHONDROITIN/DERMATAN SULFATE, Jeremiah Silbert, et al., IUBMB LIFE, Vol. 54, pp. 177-186, October 2002.
ne	IG	FUNCTIONAL CHARACTERISTICS AND CATALYTIC MECHANISMS OF THE BACTERIAL HYALURONAN SYNTHASES, Paul Weigel, IUBMB LIFE, Vol. 54, pp. 201-211, October 2002.
ne	IH	KERATAN SULFATE BIOSYNTHESIS, James Funderburgh, IUBMB LIFE, Vol. 54, pp. 187-194, 2002.
ne	II	MAMMALIAN HYALURONAN SYNTHASES, Naoki Itano, et al., IUBMB LIFE, Vol. 54, pp. 195-199, 2002.
ne	IJ	"Identification of the capsular polysaccharides of Type D and F Pasteurella multocida as unmodified heparin and chondroitin, respectively", DeAngelis et al., Carbohydrate Research 337:1547-1552 (2002).
ne	IK	"Identification and Molecular Cloning of a Heparosan Synthase from Pasteurella multocida Type D", DeAngelis et al., The Journal of Biological Chemistry. 277(9):7209-7213 (2002).
ne	IL	"Identification of the Xenopus laevis cDNA for EXT1: A Phylogenetic Perspective", Hill et al., DNA Sequence, 13 (2):85-92 (2002).
ne	IM	"cDNA cloning and distribution of XEXT1, the Xenopus homologue of EXT1", Katada et al., Dev Genes Evol. 212:248-250 (2002).
ne	IN	"Demonstration of a Novel Gene DEXT3 of Drosophila melanogaster as the Essential N-Acetylglucosamine Transferase in the Heparan Sulfate Biosynthesis", Kim et al., The Journal of Biological Chemistry, 277(16):13659-13665 (2002).
ne	IO	"Inhibition of B16-BL6 melanoma lung colonies by semisynthetic sulfaminoheparosan sulfates from E. Coli K5 polysaccharide", Poggi et al., Semin Thromb Hemost. 28(4):383-92 (2002).
ne	IP	"Heparin and Heparan Sulfate Biosynthesis", Sugahara et al., Life, 54:163-175 (2002).
ne	IQ	"Hereditary multiple exostoses and heparan sulfate polymerization", Zak et al., Biochimica et Biophysica Acta 1573:346-355 (2002).
ne	IR	MOLECULAR CLONING AND EXPRESSION OF HUMAN CHONDROITIN N-ACETYLGLACTOSAMINYLTRANSFERASE, Toru Uyama, et al. JOURNAL OF BIOLOGICAL CHEMISTRY, Vol. 277, No. 11, pp. 8841-8846, January 2002.
ne	IS	MOLECULAR CLONING AND CHARACTERIZATION OF CHONDROITIN POLYMERASE FROM ESCHERICHIA COLI STRAIN K4, Toshio Ninomiya, et al., JOURNAL OF BIOLOGICAL CHEMISTRY, Vol. 277, No. 24, pp. 21567-21575, April 2002.
ne	IT	MOLECULAR CLONING AND CHARACTERIZATION OF A NOVEL CHONDROITIN SULFATE GLUCURONYLTRANSFERASE THAT TRANSFERS GLUCURONIC ACID TO N-ACETYLGLACTOSAMINE, Masanori Gotoh, et al., JOURNAL OF BIOLOGICAL CHEMISTRY, Vol. 277, No. 41, pp. 38179-38188, July 2002.
ne	IU	STRUCTURE FUNCTION ANALYSIS OF PASTEURILLA GLYCOSAMINOGLYCAN SYNTHESIS, Wei Jing, et al., GLYCOBIOLOGY, Vol. 12, No. 10, pp. 705, October 2002.
ne	IV	"DETECTION OF SUBMICROGRAM QUANTITIES OF GLYCOSAMINOGLYCANS ON AGAROSE GELS BY SEQUENTIAL STAINING WITH TOLUIDINE BLUE AND STAINS-ALL", Volpi and Maccari, Electrophoresis, 23(24):4060-4066 (2002).
ne	IW	"STRUCTURAL/FUNCTIONAL CHARACTERIZATION OF THE ALPHA 2-PLASMIN INHIBITOR C-TERMINAL PEPTIDE", Frank et al., Biochemistry. 42:1078-1085 (2003).

N. Aneel 2/16/06

EXAM INIT.	NON PATENT DOCUMENTS	
		<p>Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published</p>
ve	IX	<p>"Trp-999 OF BETA-GALACTOSIDASE (ESCHERICHIA COLI) IS A KEY RESIDUE FOR BINDING, CATALYSIS, AND SYNTHESIS OF ALLOLACTOSE, THE NATURAL LAC OPERON INDUCER", Huber et al., Biochemistry, 42(6): 1796-1803 (2003).</p>
ve	IY	<p>"SEPARATION OF CAPSULAR POLYSACCHARIDE K4 AND DEFRUCTOSYLATED K4 DERIVED DISACCHARIDES BY HIGH-PERFORMANCE CAPILLARY ELECTROPHORESIS AND HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY", Volpi, Electrophoresis, 24(6): 1063-1068 (2003).</p>
ve	IZ	<p>"MILLIGRAM-SCALE PREPARATION AND PURIFICATION OF OLIGOSACCHARIDES OF DEFINED LENGTH POSSESSING THE STRUCTURE OF CHONDROITIN FROM DEFRUCTOSYLATED CAPSULAR POLYSACCHARIDE K4", Volpi, Glycobiology, 13(9):635-640 (2003).</p>
ve	JA	<p>"Broad spectrum inhibition of HIV-1 infection by sulfated K5 Escherichia coli polysaccharide derivatives", Vicenzi et al., AIDS. 17(2):177-81 (2003).</p>
<p>Non Patent Documents: ¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.</p>		
<p>Examiner Signature: <i>Neel</i> 2/16/06</p>		<p>Date Considered:</p>
<p>EXAMINER: Initial if citation considered, whether or not citation is in conformance and not considered. Include copy of this form with next communication to applicant. **Place of Publication refers to name of publication in which the information was published.</p>		

M:\GENERAL\3554 Hyalose\3554.097\1449 IDS.wpd